

cards are received and a count of guests attending is made, place cards can be ordered in an exact quantity. In sum, there are processes that use the World Wide Web to produce identical printed items, but not unique ones; and there are processes that produce unique printed items but do not use the World Wide Web to do so. This invention is new and novel in that it uses the World Wide Web to provide unique printing for the highest degree of individualization achievable for each printed item.

#### BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

FIG. 1 is a block diagram of the preferred embodiment.

FIG. 2 is a flow diagram showing a method for template selection.

FIGS. 3(a) and 3(b) illustrate templates that serve as the basis for web page data entry forms for the entry of non-variable (fixed) data, personalization variables, and individualization variables.

FIG. 4 is a flow diagram showing a method for testing for conditional variables and attribute variables.

FIG. 5 is a schematic view of a typical form for the data collection of individualization variables.

FIG. 6 is a flow diagram illustrating a method for printing in either of two locations.

#### DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 is a block diagram illustrating the present invention. The embodiment supports individualized printing over the Internet using the World Wide Web with a printing device located on the server system and, optionally, the client system. The client system 101 contains a browser and includes an optional printer 102. The printer may be a laser printer, an ink-jet printer, or any printer capable of printing uniquely different output in each print operation. The server system 103 includes a server engine, client identifier table 104, an array of forms or web pages 105, customer database 106, order database 107, inventory database 108, template database 109, personalization database 110, individualization database 111, and a printer 112. The server engine receives HTTP requests to access web pages identified by URLs and provides the web pages 105 to the client system 101 via the communications network 113. When the client system 101 makes a request, the server system 103 presents a web page 105 to the client

system browser. This web page 105 is a data entry form which requests customer information, e.g., name, address, credit card, and so on. The customer also provides a unique identifier such as a “user name” and “password” so that the server system can recognize the customer at a later time or date without repeated use of a data entry form. When the customer completes the data entry form and presses a button on that form, the server system receives the data and stores the information in the client identifier table 104 and is used as a pointer to the customer database 106 and the order database 107. Web pages for the entry of customer information are in common use throughout the Internet and their design and implementation are well known to those skilled in the art.

The various databases shown in FIG 1 can be combined into one database or can be constructed as separate databases. Any number of databases can be added. For example, if the system were used in an ecommerce application, a product-pricing database would be included. Or, a product-pricing table might be part of one database. Similarly, all of the ‘databases’ of FIG. 1 could instead be tables as parts of one database. The specific design of a database, database tables, indices, pointers, fields, records, and links among tables are easily recognized by those skilled in the art.

The customer interacts with the server system to select an individualization item to be printed from the inventory database 108. In one example, the inventory database 108 might contain product numbers for paper stock that contain different designs and of different sizes. Or the inventory database 108 might contain a tabulation of types of products, for example, golf balls, coffee mugs, paper stock, and so on. If the customer chose coffee mugs, the logic within the database would then point to a table that stored the inventory of all coffee mugs. The customer would then choose a style, type, or coffee mug color.

To implement the process of showing the customer the inventory stored by the inventory database 108, the server system 103 receives a request from the client system 101. The server system ‘knows’ that this is a request for the inventory because this is included in the design of a web page 105. The current web page displayed on the client system 101 simply had a button labeled “Show Product Inventory”. The design, layout, colors, or any other features of web pages 105 is well known to those skilled in the art of web page design. The server system 103 in response to the request sends the client system 101 a new form that generally could be one of

two basic designs. One design would show a consecutive listing, preferably pictures, of all the types and colors of coffee mugs in the inventory. An alternative design might show the first coffee mug with buttons such as “Next” and “Previous” on the form. It should be obvious therefore that the specific design of the form chosen by the web page designer has some bearing on the size or quantity of the coffee mug pictures. The form might also contain a statement such as “Select your desired Coffee Mug by clicking a picture.”

Once the customer chooses the type or style of product, they would be presented with an array of templates from the template database 109. Again, as with any database, the template database 109 is linked or pointed to based on the item selected from the inventory database 108. The selected template can contain a multiplicity of types of fixed data, personalization data, and individualization data. Consider that the customer has chosen a coffee mug. Appropriate templates for coffee mugs might depict various places on the mug to include a corporate logo or photograph along with various options on where to print a company name with or without a company motto. Up to this point, this invention has depicted the personalization process that is commonly available. Next, FIG. 1 shows how individualization is achieved.

Say the array of templates presented to the customer from the template database 109 contained variables such as “employee photograph”, “employee name”, and “employee title” in addition to “company logo”, “company name”, and “company motto”. One type of data the customer provides modifies the template content and is repeated on each item to be printed. That would be all the “company” data and this is an example of personalization data. A second type of data the customer provides modifies the template content and is printed uniquely on each individualized item. That would be all the “employee” data and this is an example of individualization data. The template might also include fixed data that would be printed on all items. One example of fixed data is “Copyright” followed by a personalization variable “company name”. Other types of data within the template database 109 might consist of conditional branches which alter the format or content of the template based on the data that is associated with other variables within the template. The variable data required for insertion into the template, is stored on the server system 103 within the personalization database 110 and the individualization database 111. Personalization data is indicia that are repeated, for example, company name, on each printed item. Individualization data is indicia that is unique, for